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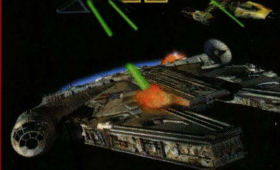
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4 The Dig



Possibly LucasArts' most ambitious adventure to date, *The Dig* boasts a storyline by master storyteller Spielberg, dialogue by author Orson Scott Card, and (occasional) graphics by Industrial Light & Magic. But it's taken three project leaders to turn the movie-scale vision into CD-ROM reality. **Edge** unearths the truth behind this most problematic of projects.

10 Rebel Assault II



Rebel Assault took the gaming world by storm, selling over a million copies worldwide, and becoming the biggest-selling CD-ROM entertainment title in 1993. With the sequel entering the last hurdle, **Edge** spoke to programmer and project leader **Vince Lee** about the first *Star Wars* filming to take place since *Return Of The Jedi* in 1982...

14 An audience with...



Jack Sorensen – ex-punk band, ex-finance trader. The new president of LucasArts expounds on the future of the second biggest entertainment software publisher in the world. As links with Lucasfilm and Lucas Digital grow ever stronger and the new *Star Wars* movies ram up to production, LucasArts is poised to take the next generation of videogames by storm.

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Thanks to Lisa Star and Judy Grossman
Virgin Interactive Entertainment

Cover

Cover image: *The Dig* promotional artwork

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The Dig

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Rebel Assault II

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Voted
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Using the Force

LucasArts would seem to be in a pretty enviable position. It has access to the most valuable intellectual properties in the world (short of maybe Elvis' and The Beatles' back-catalogue). It has links with the best special effects facility in the world. Its parent company is about to begin work on a series of movies which the term 'blockbuster' is not fit to describe. And it has also managed to produce some of the most successful videogames of all time.

So when you consider that this synergy has yet to reach its full potential, you can begin to imagine what those alliances might achieve.

When the three new *Star Wars* films appear toward the end of the millennium, LucasArts and ILM will be sharing the same file formats, while characters and ships designed for the games may well make it into the movies. Now there's a Force to be reckoned with...



prescreen

The Dig

With a story by Steven Spielberg, animation by an Oscar nominee, and effects by ILM, *The Dig* promises to be a major gaming event. **Edge** unearths the truth about LucasArts' latest



Almost five years since its original conception, LucasArts' *The Dig* is finally coming to an

end. The tale of interstellar intrigue – which has seen three project leaders, numerous staff changes and two company presidents – is all but complete.

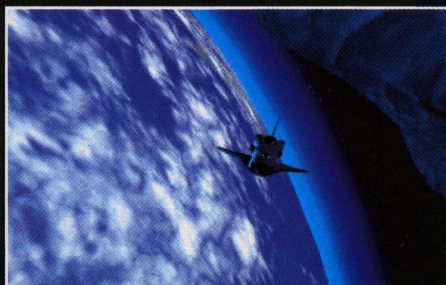
The tale goes thus: in the near future, a wayward asteroid is on a collision course with earth. Naturally, the threatened inhabitants decide to avert disaster by sending a shuttle crew to rendezvous with the rock. Once there, the three-person crew plant atomic charges to blast it on to a different trajectory.

This achieved, the crew – commander Boston Low, mission specialist Ludger Brink and news reporter Maggie Robbins – decide to explore. The atomic charges have opened up rifts in the asteroid's surface, and inside they discover chambers of alien manufacture. Their solving of an ancient geometric puzzle sees the asteroid morph into a crystalline spaceship and hurtle across the universe, dumping the threesome on to the surface of a barren, arid planet. And so the game begins...

The plot of

The Dig is actually the brainchild of Steven Spielberg, explains **Sean Clark**, project leader of the game. 'He was thinking, *Treasure Of Sierra Madre*, *Forbidden Planet*... that'd be kinda interesting. Of course a lot of people heard that and went, "What? What are you going to do with that?". It took a little time to glean exactly which elements we should use, but we figured it out and that's what we're trying to get across – the concept of the drama and the conflict.'

Depending on which story you believe, Spielberg's original intention was to make his story into a movie, but it soon became obvious that budgetary restrictions made it impractical. He then



Set in the near future, *The Dig* kicks off as a three-person shuttle team set out to divert the path of a rogue asteroid. The mission is a success, but there's more to this rock than meets the eye...

considered doing it as a short story which (so it's claimed) was the creative spark for his *Amazing Stories* TV series. Again, the scope of the tale prevented a small-screen airing, and he finally approached LucasArts which accepted the challenge.

But while *The Dig* may look like typical LucasArts adventuring fare, there are certain innovations to be found therein – most importantly the tone of the piece. Clark admits they've never made a game this serious before: '*Indiana Jones* is serious but it still has a sense of humour to it – like the films. It's deeply philosophical about how people operate, it's very realistic in the drama and the interaction – but it's not realistic in terms of motivations because it's designed after the pulp fiction stories.'

'*The Dig* is a little different. This is trying to be serious. It's trying to explore the human condition a little – how people really interact when you jam them into a strange situation. But at the same time it's not trying to be dark or overburdening. It does have its moments of comic relief.'

Tom Byron, product marketing manager, agrees: 'As the game progresses you find there's a



Part of *The Dig* team (from left): Tom Byron (product marketing manager), Bill Tiller (lead artist) and Sean Clarke (project leader)

lot of tension between the three characters, and that grows into a bit of a sub-plot. But the overall story is that there's a huge, bigger mystery to solve'.

Of course, LucasArts' high

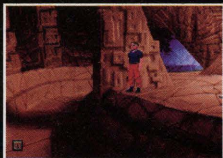
THE
DIG

'It's trying to explore the human

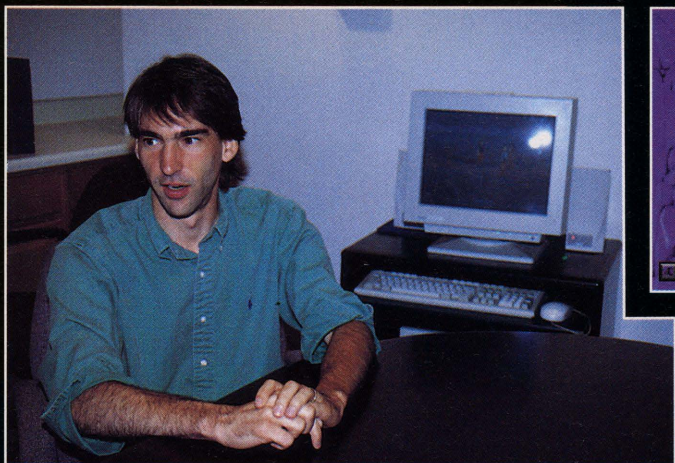
condition – how people interact when you

jam them into a strange situation'

aesthetic values have to be maintained, and *The Dig* has had no small effort lavished on the visuals. 'On the art side, too, there are many things that are innovative,' says Clark, 'such as the compositing of different styles of artwork and trying to make it all cohesive. There's 3D graphics with traditional 2D paper animation, with 2D computer animation, with effects animation. Putting them all together with a background and everything – it's difficult to do.'



Many of the locations in *The Dig* scroll as your character moves around the location. Here commander Boston Low inspects some cubist alien decor



Sean Clarke is the third project leader to battle with *The Dig*. Clarke – in conjunction with author Orson Scott Card – penned much of the dialogue

Lead artist on the project is **Bill Tiller**, who has been responsible for much of the game's look and feel. 'Our cinematic cut-scenes were animated on paper', he says. 'A lot of people were thinking, it's Spielberg – you should do it live action. But the same prohibitions that stopped him from making the movie stopped us from making it live action.'

Having opted

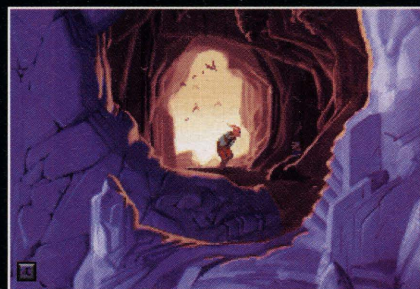
to go with hand-drawn artwork, it was decided to hire some traditional paper animators. The team also swelled to include three ex-ILM effects animators – among them Gordon Baker, an academy award nominee for Tim Burton's *Nightmare Before Christmas*.

'In order for the paper artwork not to look stiff and flat, we came up with a technique similar to the one in *Roger Rabbit*', remarks Tiller. 'We take shadows and highlights and animate those as well, then blur them so they look more rounded rather than just flat. It took a lot more time but I think it turned out really nice.'

He goes on to explain that to avoid unwanted colour changes during the digitising process, the paper artwork was scanned in

monochrome and then inked and painted on screen. 'All the artwork was scanned at hi-res so that when we shrink it down, the lines, instead of being really jaggy like some of our previous animated scenes, are smooth and anti-aliased. That also helps place them into the backgrounds, which are all anti-aliased – real sharp.'

Clark elucidates: 'The trick is making the 3D look as organic as the drawn 2D stuff. The rendered 3D starts to look too regular – it always look plastic and shiny.'

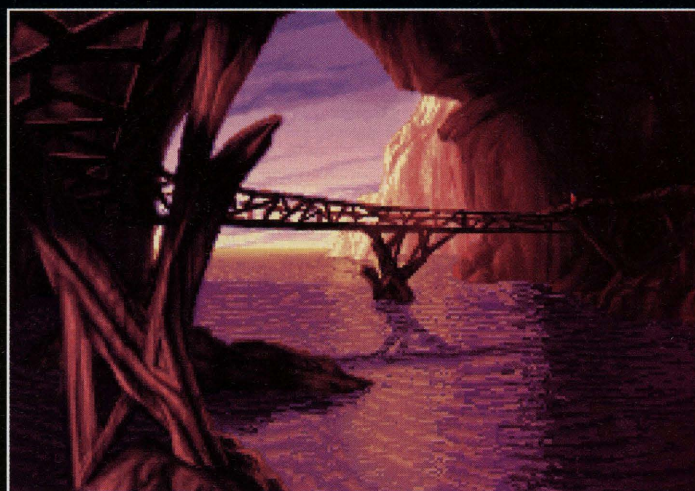


The otherworldly plot of *The Dig* has enabled its graphic artists to let their imaginations run riot. Colourful scenery is one of the game's high points

We've gone to great lengths to stop that, so it blends into the surrounding environments'.

Similar attention to detail was paid in lighting the characters as they walk around the landscapes. The team members are lit dynamically as they move from one light source to another – a technique which first saw the light of day in *Sam & Max*.

'In *Sam & Max* we did colour shifting,' says Sean, 'but there wasn't a lot we could do because they were cartoon characters and a lot of the rooms were brightly lit. But like in the magnet room, where they turn blue under the light, it's taking that philosophy and pushing it a lot further.'



Pastel palettes and dramatic POVs provide *The Dig* with some 200 impressive locations. Storing games of this type on floppy disks is no longer an option

So after all this time and effort, how big is *The Dig*? After all, LucasArts' *Full Throttle* adventure was criticised for being a little short-lived.

From Tiller's point of view, it's huge: 'There's a lot of artwork in the game', he says, raising his eyebrows. 'There's something like 200 locations – and a lot of them are scrolling. There's a lot of camera movement in the game.'

Sean Clark puts it another way: 'When we test it, we play through cheating. We skip every cut-scene and we have a key which makes the game run as fast as it possibly can, so we hold that down. Doing those two things, and knowing all the puzzles and knowing the fastest way to play through the game, it takes us two and a half hours. This is one long game'.

The Dig is already en route to other platforms, according to Clark. 'We're committed to a Mac port immediately, and we're building a Windows '95 version as well', he says. 'On the Macintosh and Windows '95, we can increase our resolution. If there's enough performance available on the machine, we double the pixels on screen. We have some algorithms that smooth the

image and do it on the fly, and the game looks a lot better. Rather than increase colour depth we increase pixel density – basically it accomplishes the same thing.'

Certainly the full-motion video is another high-point of the product. 'We used the same thing on *Rebel Assault*', explains Tiller. 'It's 'Insane' [Interactive Streaming and ANimation Engine] – that's the acronym, the Insane Engine. This one's better than the one in *Rebel Assault*, though, which handled only 64 colours with large blocks in video playback. This one gives you 256, and makes the tiles a lot smaller.'

'It's basically the same version as in *Rebel II*', interjects Clark. 'We're just borrowing anything we can lay our hands on!'

'It's also faster between cuts', Tiller continues. 'There used to be a flash of black between each one. Now it's just seamless.'

So can *The Dig* be described as an interactive movie?

'We hate that term', scowls

movie', states Byron. 'I prefer to call it interactive drama, because you really are part of the story. Plus interactive movie has all sorts of stigmas attached to it – there is no such thing at this point. It

'There's a lot of artwork in the game.'

There's something like 200 locations

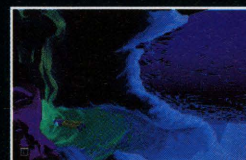
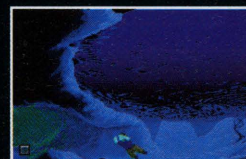
and a lot of them are scrolling'

suggests full-motion video you can't do anything with.'

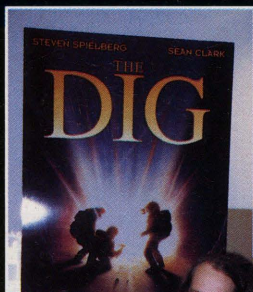
But *The Dig* does have its fair share of video footage, with a dozen major cut-scenes plus a host of smaller intermission sequences. However, Clark is emphatic that the video is there as an enhancement: 'Our philosophy is, let's build the game first and foremost and use that as a route to tell the story, and then we'll augment that with visuals which help tell that story. So when you solve puzzles, and you get to a major point and the puzzles are closely correlated to the story, then it makes sense – okay, at this point you have this big scene because that's what would happen, and then that scene needs to make sense in the overall context.'

'It turns out that if you follow those rules fairly rigidly, you get a nice reward/payback system going. Players bust their heads trying to figure something out, and then they solve it and get a nice scene. It might be an ugly scene like Brink dying, but you've moved the game forward at the same time the story has moved forward. It's not the gratuitous pumping-in-more-video because we have it. It's more an aesthetic layering, making sure the game feels right'.

Byron agrees: 'I like to call this game a total experience because, like Sean was saying, nothing is done casually. The soundtrack, for instance... beautiful, just based on Wagnerian samples. Have you



The adventure takes our intrepid threesome from one side of the galaxy to the other, across barren landscapes and into underwater caverns



Lead artist Bill Tiller with the game's promotional artwork



Much of *The Dig*'s visual allure lies in its ancient alien artefacts and artwork

Byron. Clarke laughs: 'It's like "Military Intelligence" – how can you have both? Or "jumbo shrimp" – how's that?'

'Even from a marketing side, we've been shying away from that useful little term interactive

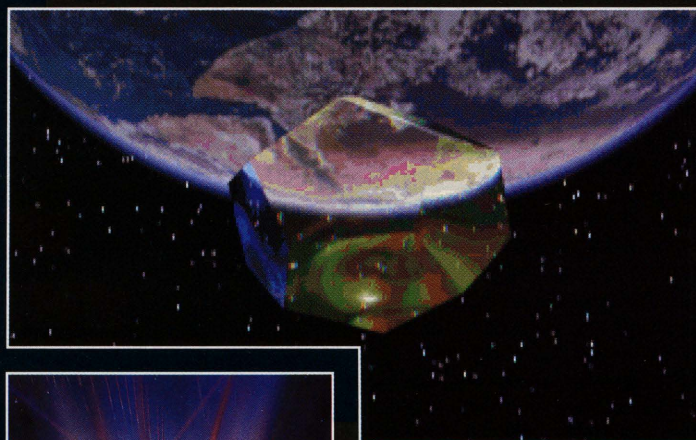
prescreen

seen the movie *Forbidden Planet*? The music will be used very much to set the tone and be kind of that eerie, electronic feeling'.

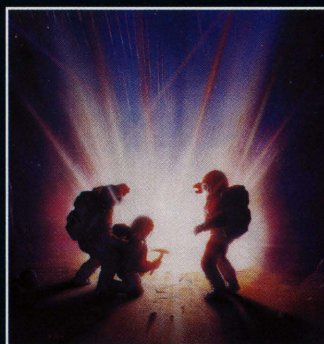
Clark has the last word. 'We're using the sound to really push the emotion, to really set the tone. It swells and falls, depending what's going on. It also takes a very different tone as you play... it's very environmental. If you walk in and it's sort of strange and quiet, eerie and dank, you'll get the kind of music that's quiet, eerie and dank. Then if you walk to a place that's better lit, you'll hear a little bit of a hopeful sound underneath that tone. It's very interesting what they're doing with it.'

One of the unsung heroes of *The Dig* is **Darragh O'Farrell**, the man in charge of putting voices to the characters of *The Dig*. Sitting alongside O'Farrell on his desk is a swathe of paper about two inches thick. This is the game's script.

'It's about four times the size of a regular movie script', remarks O'Farrell. 'Although there are only three characters, you, as Commander Boston Low, can basically ask either of the other two characters anything you really want. And as you're wandering around you do a lot of talking to yourself, a lot of musing and a lot



For the first time, Industrial Light & Magic provided visuals for LucasArts' game. The asteroid morphing sequence (above) is the product of SGI rendering. *The Dig's* artwork (left) provides some hint as to the plot.



of guessing. You know, you go, "Mmmm, ahh, this looks like a tram system". It gives the player a little hint as to what's going on, but then you have to go and find out how to operate it.'

The script is a massive 4,863 lines long. 'There are a few repeat lines which I'll obviously need to record once,' O'Farrell claims, 'but to all intents and purposes there's

about 4,500 lines.'

Surprisingly, this isn't a record for LucasArts: *Indiana Jones And The Fate Of Atlantis* boasts a ridiculous 8,000 lines of script. 'There's really only one path in *The Dig*,' explains O'Farrell. 'Once you start the game you play through until you get the right thing. With *Fate Of Atlantis* there were three independent paths. Indiana Jones would defeat the Nazis and complete the game. Then you could play it again, play one of the other paths, and it would be completely different.'

The script is broken down by 'room' – each room is a location the player can go to – and by character. So the first section of the script is made up of the lines for Boston Low, the next section of script is for Ludger Brink and so on. The rooms are currently listed in alphabetical order, so O'Farrell has to go through and break it down into some kind of chronological order, to cut down on the amount of explanation he has to give to each actor.

'It presents itself as something of a challenge,' says O'Farrell, 'because you're only recording one character at a time – it isn't like a theatrical script. I'll be in the



The Dig's narrative is driven along by neat animated sequences and cut-scenes.



The Dig's vocal soundtrack is being coordinated by Darragh O'Farrell. The script for the game sits on his desk – two inches thick and nearly 5,000 lines long.

studio with Robert Patrick – who you may know as the T-1000 [from *Terminator 2*]. I'm in the studio with him for about eight days pretty much non-stop – I'm sure he's going to hate me by the end of it. He's going to do all his lines and the problem is that the other characters aren't there to play off of him. As the director you have to be pretty much on top of the conversations that go on, and that's probably the hardest part of the whole thing.'

As well as the technical constraints of the way the voices are sampled and stored, O'Farrell also has budgetary restrictions to consider. 'Yeah, you wouldn't necessarily want to have all the actors in the studio at one time', he says wryly. 'Especially when you're dealing with costly star talent. If you have everyone in the studio then he [Patrick] could be there three weeks as opposed to eight days – you wouldn't want to have an expensive talent in the studio for that duration.'

As more and more software companies turn to major TV and movie stars to play, or at least voice the characters in their games, money is becoming an

increasingly important factor. O'Farrell wouldn't divulge how much the vocal talents of Robert Patrick were costing, but did intimate the sort of figures involved: 'I spoke to a nice agent who represents somebody that you probably know very well, and they were saying how he was working on a movie right now. Now this isn't somebody of the Tom Cruise calibre – no one even near that – but they hinted that this person was getting \$200,000 a week for a movie!'

The choice of Robert Patrick wasn't necessarily as star-stricken as you would assume: 'The nice thing about Robert Patrick is that we didn't pick him necessarily because of who he was – it was really his voice quality. The favourite at the time was Robert Hayes who plays the pilot from *Airplane*. But Sean Clark gave me scores on voice talents that I'd given him, and he gave Hayes an 8, which suggested he wasn't really thrilled about it.'

'I was sitting here looking out of the window, thinking what are we going to do... Then I



Terminator 2's Robert Patrick provides the 'vocal talents' for commander Boston Low. No square-jawed heroism here, though.

remembered that I had a CD here with Patrick's voice on it. Sean heard it and goes, "Yeah, yeah, that's pretty good, I like that".'

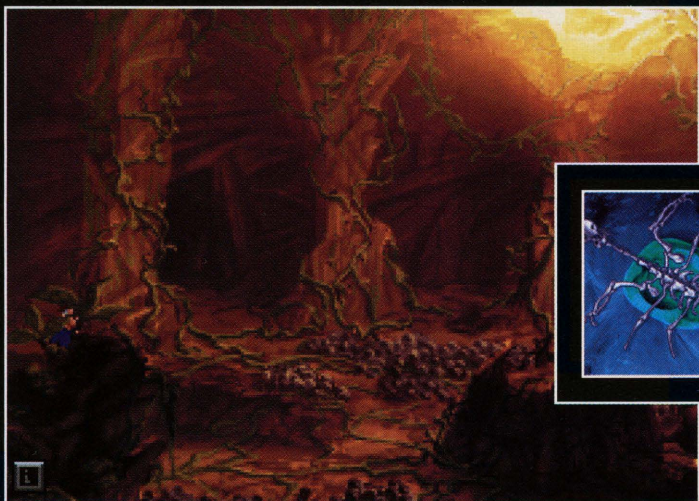
Most of the voices auditioned were deep, super-hero, space commander voices – square jaw

'I'll be in the studio with Robert Patrick

for eight days pretty much non-stop'

and steely eyes – which wasn't really what O'Farrell wanted. 'The nice thing about Robert Patrick is he still has a hint of a mid-western accent, which really made him stand out above everybody else.'

Robert Patrick's vocal talents can be heard when *The Dig* makes its European debut some time in November.



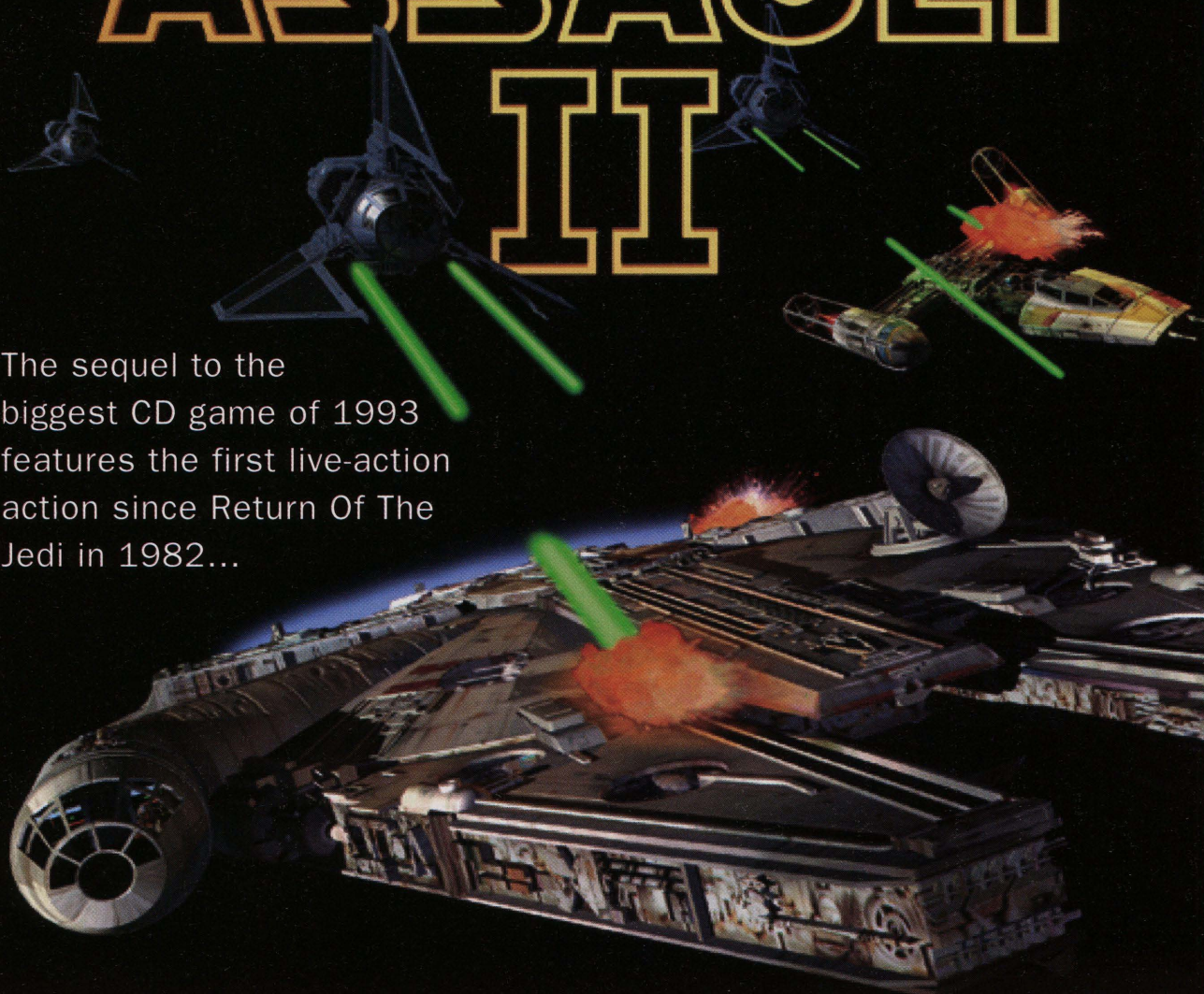
The luscious graphics in *The Dig* provide a believable backdrop for the bigger story of drama and human conflict. *The Dig* is a relatively serious game, with serious intentions – one of the characters even loses their hand at one point.



pre screen

STAR WARS® REBEL ASSAULT II

The sequel to the biggest CD game of 1993 features the first live-action action since Return Of The Jedi in 1982...





ucasArts' 1993 title *Rebel Assault* was the company's first attempt at streaming video

footage from CD with the notion of adding an interactive layer. And although it received several lukewarm reviews in the specialist press, *Rebel Assault* still managed to win over the public, and went on to sell over a million units.

Predictably there is a sequel, and at the helm once more is **Vince Lee**, the programmer responsible for the original.

Rebel Assault II has been in production since April of last year, although during the evolution of the sequel, Lee has been involved in producing versions for Mega CD and 3DO. He was particularly pleased with the latter: 'Originally I used to be an Amiga programmer', he says. '3DO is a very similar structure, designed by the same people, so it's very hands-off. My system is designed to be really portable and its operating system is actually quite

useful – we slapped the whole engine on 3DO and it just ran right away'.

With the various *Rebel Assaults* out of the way, work continued apace with the sequel. The plot of *Rebel Assault II* follows on from the first, with Rookie I reprising his role on behalf of the rebellion. The story takes place in the time-frame between the Star Wars and Empire Strikes Back movies: with the demise of the Death Star, Darth Vader has redoubled his efforts to destroy the Rebel Alliance.

The Empire

has produced a secret weapon, which is being used to wipe out Rebel squadrons in the area of space known as the Dreighton Nebula. The Nebula is an area of mystery and mythology – the deep space equivalent of the Bermuda Triangle. The Empire is using this as a cover for its weapons testing. Inevitably, you're sent in to discover what's going on...

Lee reckons that *Rebel II* is a

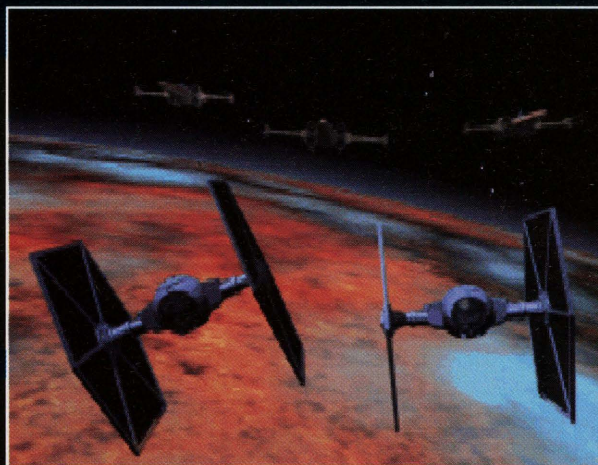
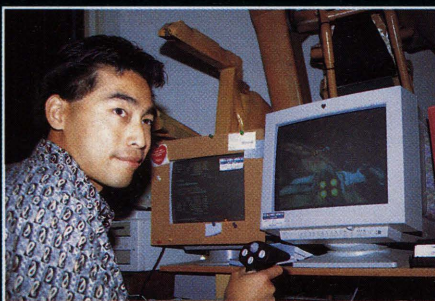


Vince shows off his homemade fancy dress Aliens power-loader



A menacing air is created thanks to some tidy graphics, and the appearance of the Dark Lord of the Sith...

major leap over the first game, with regard to the technology involved. He generated new codecs – video compression algorithms – to upgrade the quality of the visuals. 'I wrote my own compression algorithm and code to compress and animate video', explains Lee. 'The compressor in the first game was fullscreen at the time but it was very limited in colour and really couldn't compress realistic images. The new compressor really allowed us to do video – which we couldn't do in the first game other than basically having a still



Rebel Assault II boasts some astonishing rendered visuals, which were created in, of all things, *3D Studio*. Anyone having invested heavily in SGI hardware might well feel a little sick...

Programmer and project leader, Vince Lee (above) gets to grips with his own creation. *Rebel II* now runs full-frame in 256 colours, thanks to Lee's codecs

prescreen



Darth Vader practises his staff motivational skills once again. Live action features heavily in *Rebel Assault II*, thanks to its improved video playback capabilities

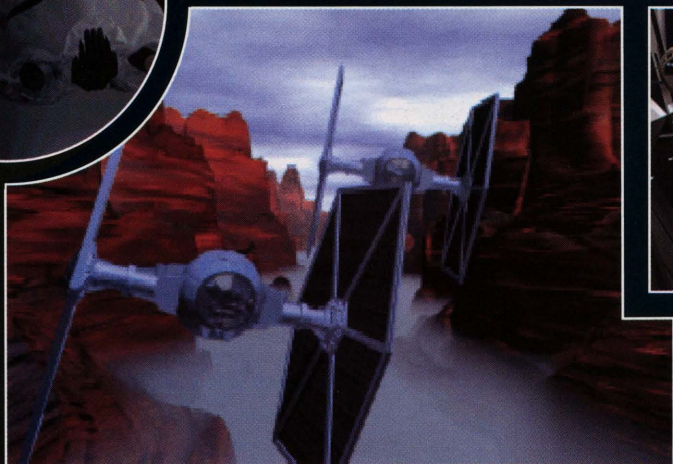
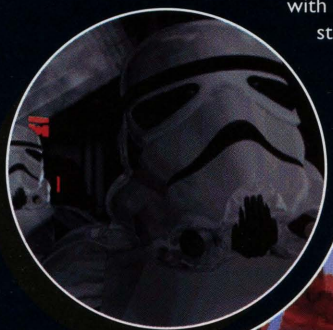
frame with little cut-out faces doing the talking. In addition to that, the sound has been revamped and that now has 10-channel, 12-bit sound.'

Of course there's a trade-off, in that *Rebel II* will only work on double-speed CD drives – a small price to pay for full-screen video in 256 colours. One surprising factor is that *Rebel Assault II* boasts the first real Star Wars filming since *Return Of The Jedi*.

'Fortunately we have Hal Barwood working in-house', Lee comments. 'He's a project leader working on his own project, but he's also a Hollywood screenwriter and director. He was video director on the project – basically I wrote the script but on the set I pretty much let him do his own thing.'

The videotaping took place over a couple of weeks in a small studio in Marin county, a few minutes from the LucasArts building. Lee describes the process of creating the in-cockpit shots: 'The first time we went out we primarily taped the cockpit segments', he says. 'We had this wonderful rig made for us that

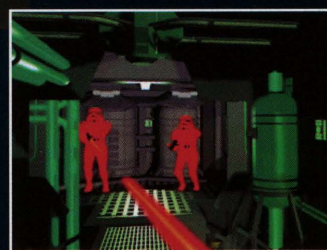
was this big platform with chairs and stirrups up on a big inner tube with handles on it, and we



The rendered Stormtroopers (inset) are difficult to differentiate from the live-action heavies. A brace of Twin Ion Engine fighters (above) negotiate a gully



As with the original, *Rebel II* promises another Stormtrooper duck-shoot



had a couple of guys there rocking the thing. We also had another week of shooting where we spent most of the time doing Stormtroopers walking down hallways, running down hallways, that sort of thing'.

Although the team had access to genuine Stormtrooper costumes, much of the Stormtrooper footage in the game is pre-rendered – and for very good reason. 'We didn't want to do any stunts', Lee confesses. 'It's impossible to do stunts in a Stormtrooper costume anyway –

they're just styrene. You can't even sit in them, 'cause if you sit in them you break 'em – they don't bend at the hip.'

Like the original, the game is split across 15 levels, with space combat sections – including flying through some impressive-looking structures – alternating with interior on-foot sections, as Rookie I infiltrates enemy installations.



The 3D Studio model of the Millennium Falcon was so accurate, animators at Industrial Light & Magic have expressed an interest in the original file. Allegedly

'It's impossible to do stunts in a Stormtrooper

costume – they don't bend at the hip'

And as with the original, the game's real strength lies in its graphics. The sequences **Edge** saw were quite breathtaking, especially one segment in which a detailed Millennium Falcon turns and flies out of an Empire-held hangar. 'The model was so accurate, there was talk of ILM using it', comments Lee.

Another of Lee's

innovations is that the game is now entirely user-customisable. Players can immediately access a table of damage values, gun hits, enemy numbers, and so on, making the gameplay anything from easy to impossible.

Lee explains the origin of the concept: 'One of the things that came out on the network, a while ago, was something called *RA-Easy* that a programmer had created. Apparently he'd done a hex-dump of my code – the original game has an undocumented feature which allows you to edit some of the parameters internally. He went and wrote his own little editor for the table that modifies the values.'

'I guess there are a number of people out there who really love tweaking the game. I decided early on in *Rebel II* why don't I make this an included feature to just add to the whole game experience – once they've played the game,



This sequence of the Falcon escaping an Imperial complex is worthy of inclusion in any low-budget SF movie. The Stormtrooper is also a 3D render

people can sit there and tweak it so that they get their favourite challenge. They can't complain about how tough or how easy the levels are, and maybe they'll do a better job than I can and post it up on the net for other people'.

One worrying aspect is that players can immediately go to the editing screen, make themselves invulnerable, and see the entire the game at their first sitting.

Lee is unconcerned. 'Inevitably cheats are released that allow you to do that anyway', he says. 'It would get out on the network and they would find out about it soon enough. And I don't think that people stop playing the game because they have seen all the video, because the game itself still holds its appeal.'

'The one thing I want to do if they do that is to have some kind of penalty where, say, if they play with a custom pilot then I don't show them a particular scene. So there's still another reason to sit play at one of the six settings.'

With rendered sequences that wouldn't look out of place in the original Star Wars movies, and improved gameplay, *Rebel Assault II* will no doubt be another huge hit for LucasArts when it launches in November.



The disparate disciplines of live-action, 3D ray-traced animation and 2D backdrops, necessitated computer compositing. ILM isn't the only one that can bring the Star Wars universe to life

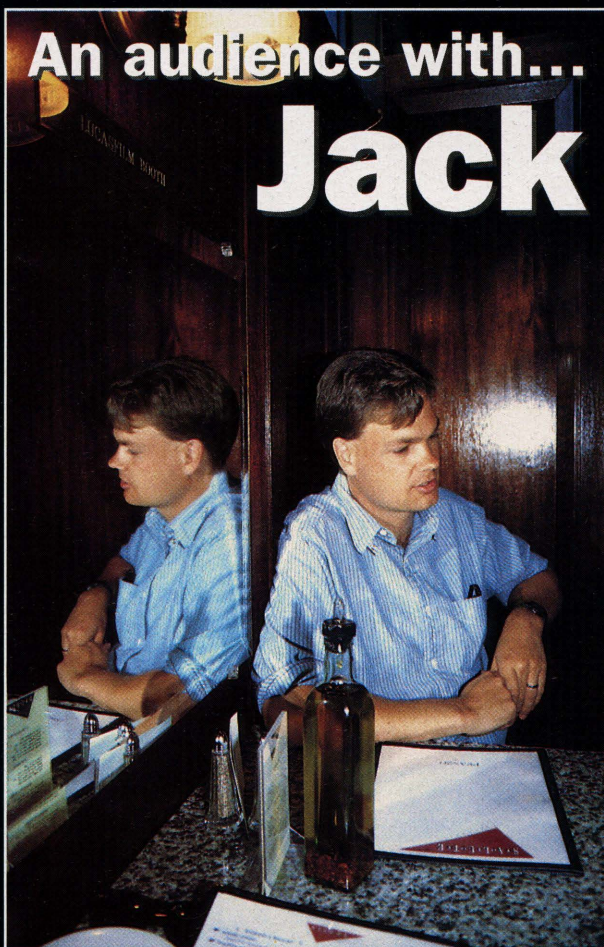


Mark Christiansen (left) was in charge of compositing the different graphical elements together. Lead artist Robert Green (right) sits under the shadow of a laser cannon prop from a *Return Of The Jedi* sand skiff

An audience with...

Jack Sorensen

With Star Wars fever about to engulf the world anew, **Edge** quizzes the president of LucasArts about the future...



The president of LucasArts is far from most people's ideal of a corporate power player. Often

bedecked in T-shirt and shorts, he drives a beat-up, 20-year-old VW Golf, and started out in a punk band. From this he made the quantum leap to finance, trading options for a major bank.

Comparing the rock 'n' roll life of an options trader to that of a pro footballer ('you can only do it so long before you think, like, what the hell am I doing with my life?'), Sorensen took a more traditional roll as a finance manager. Then, five years ago, he was brought into LucasArts to start up the business and accounting functions.

Edge What was your route through the LucasArts hierarchy?

JS Well it's somewhat confusing. I was hired as the director of business operations in 1990. After my original boss, Doug Glen, moved on, Kelly Flock – who was then director of marketing – became general manager. And then after Kelly left a year later, I became general manager for a year. During that time under Kelly and myself the board of directors was looking for a president to head up LucasArts, which was going to be recognised as a stand-alone company. They found Randy Komisar who was here for around 15 months before he moved on last April. Then it went back to me, but rather than just being general manager of a division in the company, I'm now president, and I report to George Lucas who is chairman of the board.

Edge So how often do you get to talk George?

JS Well, it varies. Right now I'm talking to him a lot – probably once a week – but when he goes into production he can disappear for months at a time. He always shows up for board meetings though.

Edge We've heard that George only has a passing interest in what happens at LucasArts...

JS No, that's not correct at all. As a matter of fact over the last two to three months we've been talking very frequently about the next five years – setting out what LucasArts is going to do in support of his new films, and how we can leverage

those license titles for our original titles. If anything, he's probably more up to speed on the genres and top games right now than most industry board members.

Edge So do you think he's going to try and get even more involved?

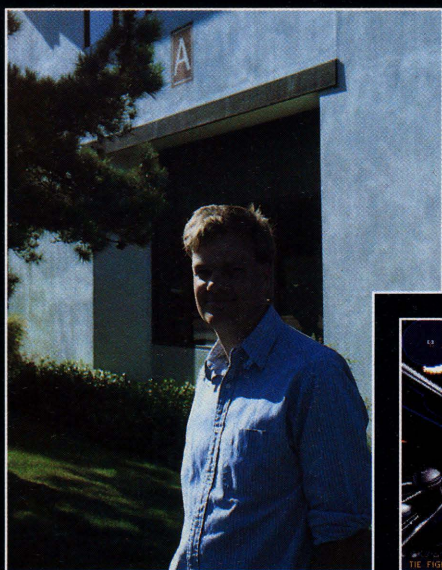
JS Well, mainly what he's doing is pretty much what he's done for all his companies, which is to provide a set of principles and goals – and most of those are very long term. After establishing these goals, we're allowed to make whatever decisions we need in order to run our businesses day to day.

Edge Is there one product that you think has 'made' LucasArts?

JS Sure. There are really two big products over the last three years that have allowed us an enormous amount of freedom, and those are X-Wing and Rebel Assault.

Edge The links between ILM and LucasArts have been pretty tenuous so far. Now that you're becoming much more technology-oriented, are we going to see the links between ILM and LucasArts getting even stronger?

JS Oh, yeah. You can talk about synergy all day long, but the fact is that they're doing 5,000 lines of resolution and in a linear medium. We're dealing with 640x480, at best, in an interactive medium. There just hasn't been that many places in the past where the companies have needed to cross over to one another. ILM has always been a great help to us with technology and in offering advice. And they've really helped us to



Jack Sorensen outside the LucasArts building in San Rafael. Sorensen credits *Rebel Assault* and *X-Wing* (above) with the freedom afforded to LucasArts of late

avoid making a lot of the mistakes that other developers have. But now that both companies are using the same tools, like Silicon Graphics, we're certainly going to sharing models and tools much more frequently, particularly when it comes to the new Star Wars films. I mean we'll be in production by next year – and so will they. And there's a huge amount of 3D rendering... You look at something like *Casper* and that's small in comparison to the job that needs to be done for the new films.

Edge Is LucasArts going to be using the enhanced version of *Star Wars* [A New Hope] to launch new titles?

JS We'll certainly be releasing product around that event, but it won't be anything taken directly from A New Hope. In general we like to use the Star Wars films as a jumping off point in order to bring something new to the story. In particular we like the time right after Return Of The Jedi since it gives us the most freedom to create new characters and situations. It's a very big open time period and George isn't going to touch it – he has no intention of ever doing those films.

Edge So post-Jedi is your domain?

JS Well, there's obviously been

lots of books that have dealt with that time and we've tried to have as much consistency with them as possible, but there's lots of room there. We can go off into almost any corner of the galaxy and do something pretty cool with it that also meets more of the demands of the type of game genre we're working in.

Edge It must be difficult to try and produce a product when you wonder if it will fit in with the existing *Star Wars* universe?

JS Yes, but at the same time we like to push the boundaries a little because we think we can offer the public new things from Star Wars that they can only find in our games. *Rebel Assault II* is really the first serious live action Star Wars shooting that's been done since Return Of The Jedi. On a computer screen it looks as good as anything that was done on New Hope. But that's the first filming that George has allowed since the films, and he has to approve all our stories. He gets very involved at that level and makes sure that there's consistency of tone and look.

Edge Why is it that he doesn't want to do the final trilogy?

JS There's not the time. He's over 50 now and doesn't really want to be working on Star Wars ten years from now. He's got plenty of other projects that he's interested in. He wasn't going to do the first three either, you know. But he's

'If a group gets really excited about

something that makes any kind of

business sense, you let them build it'

very interested in it again now.

Edge Which are, and which will be the most important platforms for you to develop on?

JS PC is still the heart of what we do. You don't have to pay royalties on it, which is great. After that, there are really three primary platforms – besides Macintosh, which for us is a porting platform for our PC titles. We're looking at what we consider the three major console platforms of Ultra 64, Saturn and PlayStation.

Edge Can you tell us anything about any of the products that

interview



Jack Sorensen, president of LucasArts, at ease in the local Italian restaurant. Such is the loyalty of the Lucas clientèle, the company has its own booth complete with engraved 'Lucasfilm' nameplate (see picture on the opening page)

you're developing on those particular platforms?

JS The only game that we've actually shown publicly – and it was very, very early – is a new version, to say the least, for the Sony PlayStation of the old C64 game *Ballblazer*. But it'll be a very, different game from the original, very deep and technically sophisticated.

Edge Well, of all the old LFL titles – especially with the 3D capabilities of the new machines – why oh why didn't you do *Rescue On Fractalus* or *Koronis Rift*?

JS [Laughs] The biggest reason for *Ballblazer* was because it seemed almost made for the PlayStation hardware. We haven't had that many opportunities on PC to do head-to-head games, and that's what we all play here after hours. We put up *Doom* and *Descent* on the net, or we play fighting games all day, so maybe there's a bit of that in why we're doing *Ballblazer*. You know, so we have something

to play around the office.

Edge Then its going to be split-screen and link-up?

JS Yeah, that's right. With multiple levels, different kinds of playing fields and 3D obstacles. It's a real combination of racing, sports and fighting games but with very hip technology.

Edge Any chance of seeing the other titles? Because they're really not that bad are they?

JS No, there was a base line of good gameplay in all those old titles you mentioned. They were also very technically sophisticated for their time. You gotta understand that LucasArts is traditionally not a top-down company. I try not to sit here and think about what titles we should do. If a group gets really excited about something that makes any kind of business sense, you let them build it. I'm there to give approval not to dictate.

Edge So what's your own view on the new machines?

JS Sega... well, its strategy of moving its coin-op titles to the Saturn is obviously sound, but the hardware is more complex to work with than the PlayStation. But it does offer the opportunity for getting better at programming for it with each game, which should mean that the second and third generation games on the Saturn should look great.

The PlayStation is certainly a hot machine, and very straight forward to work on. But of course there's only so many polygons it can whip around at a time, and you can pretty much get access to that feature right away, without the practice. This has meant that many of the games we're seeing right now on the PlayStation are already great.

Edge Is the machine just all up-front then? Because some people have said that Saturn would probably appeal to the nerdy coders that like to get inside the chipsets.

JS That's exactly correct because most guys who have traditionally done assembly coding prefer the Saturn because they hate that layer of operating system on the PlayStation. But for PC people the PlayStation is generally much easier because the approach is so similar to working with the single Intel CPU. So in the end it's an issue of taste and experience.

You're going to see good games on both platforms depending on the background of the coders who are working on them. As for the Ultra, it's still too early to tell.

Edge With the advent of the next generation machines, are you not thinking about going from console to coin-op? You could do some really interesting titles on your own high-end custom hardware.

JS There are only a few companies in the world which are really good at coin-op, and it's such a difficult business to be in. I wouldn't recommend it to many companies, and several have lost their shirts at it. If, however, we could be involved in developing a game for coin-op, I think we'd try to design something that would also work on home machines, but in a more elaborate form. Coin-ops, like the Net, are the only real social forum for games. I'd like to see coin-op games for us at some point be like trailers are to films, or radio play is to albums.

Edge *The Dig* is a big, epic sort of game. But much as the scope and story are impressive, the actual characters and backdrops didn't really look that far advanced over

Sam & Max and Monkey Island 2.

Do you think that you're reaching the end of the evolutionary line?

JS Well, the issue is trade-offs. *Full Throttle* focussed on a more visually detailed cinematic style, but with a more linear storyline. Whereas *The Dig* represents really a return to the depth of gameplay that we did in *Indy Atlantis*. And what you need in such a complex game are characters that work within an enormous variety of situations. I

wouldn't call this the end of the evolutionary line, but rather an indication of the two big paths down

which story games are going. This is both a style difference for the designers as well as for the players. We've seen that some players complain about the shortness of *Full Throttle*, while others think its scope is perfect. I'll bet then that many of the same people will feel *The Dig* is either too hard or finally answers the wait for a massive adventure game, 'like they used to make them'.

Edge So is it possible that *The Dig* is the last of a dying breed? You've painted yourself into a corner where these adventures have evolved into unwieldy projects.

JS They're the biggest things we do, absolutely. But increasingly

we're just about the last ones left doing these huge, animated games. But just like Disney kept their cartoon features, we need to keep doing them since it's our tradition – we wouldn't be LucasArts if we didn't keep doing these story games. So we'll have others, and which path they'll take will depend on who's designing them and what kind of story they want to tell.

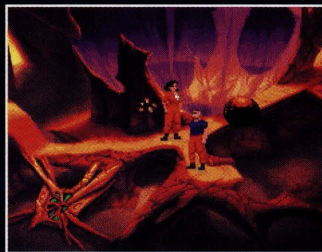
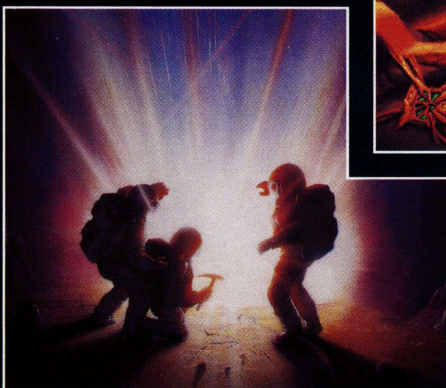
'This isn't the end of the evolutionary line

but rather an indication of the two big

paths down which story games are going'

Edge But isn't it the case that *The Dig* has been in development for so long, that by the time it comes out it will have already been surpassed by other games with newer technologies?

JS Well it was in development for about four years but effectively we completely re-did it for CD. We didn't think we'd be able to represent both Spielberg's name and the Lucas name on seven or eight floppies. So as soon as we made the leap to redo the game for CD, the entire product had to be redesigned from the ground up in order to be competitive. This process has taken a little less than two years, which is normal for these kind of games. I don't feel *The Dig* has by any means been surpassed by any technologies during that time, and in fact has benefitted tremendously from the techniques we learned on *Full Throttle* relating to 2D and 3D compositing, and even more so on music and sound effects. If people relate video decompression to technology, I'd rather play *The Dig* any day than some product with a dozen puzzles, when its only claim is to have forty minutes of grainy, badly acted video. *The Dig* will give 20 to 40 hours of solid gaming and LucasArts will always be about building games, not making movies.



With *The Dig*, LucasArts is reinventing itself. But as development times increase and players expect more and more, it's possible that this, and the forthcoming *Monkey Island III*, could be the last of a dying breed

LucasArts

LucasArts

the company

Softography

1982-1986

Rescue On Fractalus (Activision)
Ballblazer (Activision)
Koranic Rift (Activision)
The Idolon (Activision)
PSS Pegasus (EA)
Strike Fleet (EA)

1987

Maniac Mansion

1988

*Zak McKracken And The Alien
 Mindbenders*
Battlehawks 1942

1989

*Indiana Jones And The Last
 Crusade/adventure*
*Indiana Jones And The Last
 Crusade/action*
Their Finest Hour: The Battle Of Britain
Pipe Dream

1990

Loom
The Secret Of Monkey Island
Night Shift

1991

Secret Weapons Of The Luftwaffe
*Secret Weapons Of The Luftwaffe:
 Tour Of Duty expansion disks*
*Monkey Island 2: LeChuck's
 Revenge*

Star Wars (console)

1992

*Indiana Jones And The Fate
 Of Atlantis*
Loom (CD)
The Secret Of Monkey Island (CD)
*Secret Weapons Of The Luftwaffe:
 Tour Of Duty expansion disks* (CD)
The Empire Strikes Back (console)
Defenders Of Dynatron
City (console)
Super Star Wars (console)

1993

X-Wing
Imperial Pursuit (X-Wing
 campaign disks)
B-Wing (X-Wing campaign disks)
*Indiana Jones And The Fate Of
 Atlantis* (CD)
*Monsters aka Zombies Ate My
 Neighbours* (console)
Super Empire Strikes Back
*Day Of The Tentacle: Maniac
 Mansion 2*
Rebel Assault
Sony & Max Hit The Road
Super Empire Strikes Back (console)

1994

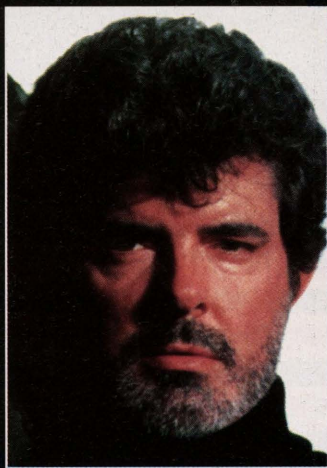
Sony & Max Hit The Road (CD)
TIE Fighter
Defender Of The Empire (TIE Fighter
 campaign disk)
Super Return Of The Jedi (console)
*Indiana Jones' Greatest
 Adventures* (console)
Ghost Patrol (console)

1995

Dark Forces
Full Throttle
TIE Fighter (CD)
*Indiana Jones And His Desktop
 Adventures*

1996

The Dig
Rebel Assault II
Cain 2095
Ballblazer X (console)
Shadows Of The Empire (console)



Visionary George Lucas and Skywalker ranch which he designed as a creative retreat for his senior staff



LucasArts Entertainment Company was founded in 1982 by George Lucas to provide the interactive element of his multi-faceted entertainment company. It is one of three George Lucas-owned holdings, alongside Lucasfilm Ltd and Lucas Digital Ltd. Lucasfilm handles his movie and TV interests, as well as the business activities of the THX Group and licensing, while Lucas Digital is comprised of Industrial Light & Magic and Skywalker Sound, Lucas' visual effects and audio post-production facilities.

The original series of eight-bit games were actually published by the likes of Epyx (in the US), Activision and Electronic Arts under the banner of Lucasfilm Games Ltd. All were critically acclaimed, and remain among the favourite titles of many a gaming veteran (indeed, an enhanced, 32-bit *Ballblazer* is due on PlayStation early next year).

With the release of *Maniac Mansion* in 1987, the company

LucasArts could never really be described as having humble beginnings, but its future is now brighter than ever

began publishing its own titles under the auspices of LucasArts and, coincidentally, entered into what would become its trademark genre. With its innovative SCUMM (Script Creation Utility for Maniac Mansion) story engine, the game effectively signalled the death of 'parsed' text-input titles in favour of the point 'n' click graphic adventures, which are now almost exclusively synonymous with the LucasArts name. A licence agreement between Lucasfilm, Atlantis Films Ltd and The Family Channel also saw a live-action version of *Maniac Mansion* hit American TV in the same year.

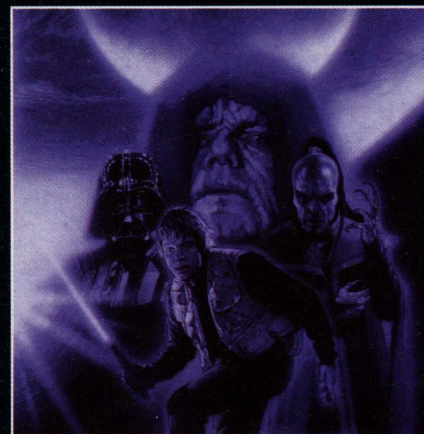
LucasArts rapidly diversified into flight simulations, thanks largely to the talents of programmer and designer Larry Holland, who would later instigate the *X-Wing* and *TIE Fighter* space combat sims. *X-Wing*, in turn, was the biggest-selling PC title of 1993.

With development

shifting over to CD and consoles, LucasArts now holds the second largest market share for computer entertainment software companies, after the behemoth Electronic Arts. In fact, *Rebel Assault* has become the biggest-selling CD-ROM entertainment title of all time, notching up sales of over one million.

Such is LucasArts' reputation, it is one of the few select software houses invited to produce software for Nintendo's Ultra 64 console. Already in production is *Shadows Of The Empire*, a 3D action adventure set in the time between *The Empire Strikes Back* and *Return Of The Jedi* movies, following the links between the Empire and organised crime.

And then we have the first of the new Star Wars episodes hitting cinemas in 1998... **E**



The next chapter in the interactive Star Wars saga is *Shadows Of The Empire* on Ultra 64

